

Partial translation of JP2004-226775: paragraphs 0036-0041 (pages 6-7), and Figs. 8-9 (page 10)

[0036]

Pickup element drive unit 30 of the present preferred embodiment comprises pickup element unit 32, retaining member 34, fixing member 16, and actuator 18 as shown in Fig. 8.

[0037]

Pickup element unit 32 is formed of plate-like pickup element base 32A, and pickup element 32B disposed on pickup element base 32A, which has a light receiving surface at the light entering side. Pickup element 32B is disposed at the center of pickup element base 32A, and pickup element base 32A is provided with holding rod 32C to which holding member 34 can be attached.

[0038]

Holding member 34 is formed of a pair of plate-like elastic members 34A, 34B. Elastic members 34A, 34B disposed are parallel to each other. One end of each elastic member 34A, 34B is fixed in fixing position P of fixing member 16, and the other end is fixed in holding position H of holding rod 32C. Fig. 9 (A) shows pickup element drive unit 30 as viewed in the direction of normal line J of the light receiving surface of pickup element 32B. As shown in Fig. 9 (A), holding rod 32C is attached to the opposite side of fixing member 16 of pickup element base 32A in such manner as to be parallel to normal line J. Elastic members 34A, 34B attached to holding rod 32C are arranged along the side of pickup element unit 32.

[0039]

In the present preferred embodiment, the shortest distance between pickup element unit 32 and fixed position P (hereafter referred to as distance S4) is shorter than the distance between fixed position P and holding position H (hereafter referred to as distance S5), that is, distance S5 > distance S4.

[0040]

Actuator 18 is formed of piezoelectric elements (laminated piezoelectric elements) laminated in the same direction as that of normal line J, which generates displacement in the direction of normal line J (direction toward the light entering side is X2, and the opposite is Y2). One end of actuator 18 is disposed at the side opposite to holding rod 32C of pickup element base 32A, and the other end is fixed on a fixing portion (not shown), thereby enabling the application of forces to pickup element unit 32 in the direction of normal line J.

[0041]

A lens unit (not shown) is disposed at the light entering side of pickup element unit 32.

The action of the present preferred embodiment is described in the following.

